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Patent Application No. 10/002,998

REMARKS

This Amendment is in response to the Office Action dated May 13, 2004. The Applicant thanks the Examiner for the careful review of the present Application. In the Office Action, the drawings and specification were objected to, claims 1, 6, 12 and 14-16 were rejected under 35 USC §101, claims 1 and 3-24 were rejected under 35 USC §102, and claim 2 was rejected under 35 USC §103. By this Amendment, claims 1, 6, 9, 12 and 14-16 are amended and claims 25-27 are added. Currently pending claims 1-27 are believed allowable, with claims 1, 6, 10, 12, 14-17 and 24 being independent claims.

OBJECTIONS TO THE DRAWINGS:

Fig. 1 was objected to in the Office Action because the accessing operation (110) covers both information transfer directions between the query processor (101) and the media network knowledge representation (111). Office Action, page 2. The Applicant respectfully submits that the accessing operation (110) covers both sending information to and receiving information from the media network knowledge representation (111), as discussed in the specification. Therefore, no amendment to the drawings is believed to be required and this objection is traversed.

Fig. 2 was objected to in the Office Action because two different item numbers (211 and 212) are labeled "content relationship" in the figure. Office Action, page 2. By this Amendment, the specification, beginning at page 10, line 1, is amended to more clearly identify that both item numbers (211 and 212) represent content relationships. In light of the amendment to the specification, no correction to Fig. 2 is believed to be required.

The Examiner objected to inconsistent usage of parentheses in specification and figures. Office Action, page 3. By this Amendment, Fig. 4 is amended to remove parentheses around items 403, 404, and 406, thereby providing consistency of item numbering in the figures. Furthermore, the specification is amended to include parentheses around item 403, 404 and 406, thereby providing consistent item numbering in the specification.

The figures were objected to because reference number 500, at page 12, line 16, is not present in the figures. Office Action, page 3. By this Amendment, reference number 500 is changed to reference number 111 in the specification.

Patent Application No. 10/002,998

OBJECTIONS TO THE SPECIFICATION:

The title of the present Application was objected to in the Office Action as not descriptive. Office Action, page 4. By this Amendment, the title is changed to "NETWORK FOR DESCRIBING MULTIMEDIA INFORMATION", as suggested by the Examiner.

The specification was objected to in the Office Action for improper use of the trademarks WORDNET, MPEG, XML, and BIM. Office Action, page 3. By this Amendment, the specification is revised to capitalize the trademark WORDNET where appropriate and to include attribution to the trademark owner of WORDNET. The Applicant, however, is unaware of any trademark rights to the terms MPEG, XML, and BIM, as used in the present Application. It is kindly requested that evidence of trademark ownership be provided to the terms MPEG, XML, and BIM, as used in the Application, so that appropriate corrections to the specification and ownership attributions can be made.

The word "concepts" at page 1, line 9 was objected to. Office Action, page 3. By this Amendment, the word "concepts" is replaced with the term "semantic concepts", as suggested by the Examiner.

The specification was objected to for the use of "content node" at page 15, line 14. Office Action, page 3. The Applicant cannot find term "content node" in the specification at the location specified.

CLAIM REJECTIONS UNDER 35 USC §101:

Claims 1, 6, 12 and 14-16 of the pending Application were rejected under 35 USC §101 as directed to non-statutory subject matter. Office Action, page 4. "In most cases, a claim to a specific machine or manufacture will have a practical application in the technological arts." MPEP 2106.

By this amendment, claim 1 is amended to recite, in part, "A method implemented by at least one computer for encoding knowledge." The Applicant respectfully submits that claim 1 recites statutory subject matter and overcomes the claim rejection under 35 USC §101. Similarly, claims 6, 12, 14-16 are amended to recite methods implemented by at least one computer. The Applicant respectfully submits that claims 6, 12, 14-16 recite statutory subject matter and overcome their respective claim rejections under 35 USC §101.

Patent Application No. 10/002,998

CLAIM REJECTIONS UNDER 35 USC §102:

Claims 1 and 3-24 of the pending Application stand rejected under 35 USC §102 as anticipated by U.S. Patent No. 6,564,263 to Bergman et al. ("Bergman"). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987), MPEP 2131.

Claim 1 recites, in part, "forming a network having nodes that represent semantic concepts." In rejecting claim 1, the Examiner cites Fig. 9 of Bergman. Office Action, page 5. Fig. 9 is a graphical representation illustrating an example of feasible modality translations and fidelity summarizations within the InfoPyramid framework. Bergman, column 4, lines 34-37. The InfoPyramid describes content in different modalities (e.g., video, audio, text, etc.) and at different fidelities. Bergman, column 7, lines 14-16. Each adjacent node corresponds to a transformation, either between two different modalities or between two different fidelities. Bergman, column 10, lines 11-15.

The Applicant respectfully submits, however, that missing from Bergman is a teaching of semantic concepts included with the InfoPyramid framework. Bergman describes a framework that provides content transformations (modality and/or fidelity), but does not present semantic knowledge. It is respectfully submitted that Bergman does not supply a teaching of forming a network having nodes that represent semantic concepts, as recited in claim 1. Thus, the rejection of claim 1 is improper because it does not ascribe due consideration to all the limitations in the claim. The Applicant therefore respectfully submits that claim 1 is not anticipated by Bergman, and earnestly requests allowance of this claim.

Claims 2-5 are dependent on and additionally limit claim 1. Since claim 1 is allowable over the cited art, claims 2-5 are also allowable over the cited art for at least the same reasons as claim 1.

Furthermore, claim 3 recites, in part, "wherein relationships between semantic concepts and between associated content are based at least in part on audio and/or visual feature descriptor values." In rejecting claim 3, the Office Action cites Bergman as teaching the above limitation. Office Action, page 6. Specifically, Bergman states, "Feature Descriptors: These modalities preferably include textures, color

Patent Application No. 10/002,998

histograms, shapes, from both still images and video, as well as motion derived from video. Note that features can be derived from either the raw data or the transformed data." Bergman, column 8, lines 42-46.

It is respectfully submitted, however, that this statement in Bergman merely establishes that Bergman recognizes feature descriptors as a source of data which may be derived from other data sources. The Applicant cannot find in Bergman a teaching of basing relationships between nodes on audio and/or visual feature descriptors values, as recited in claim 3. Thus, the Applicant respectfully submits that Bergman does not anticipate claim 3 and earnestly requests allowance of this claim.

Claim 6 recites, in part, "an encoded media network knowledge representation that comprises a network having nodes that represent semantic concepts." As discussed above, Bergman does not teach a network having nodes that represent semantic concepts, as recited in claim 6. Therefore, the Applicant respectfully submits that claim 6 is not anticipated by Bergman, and earnestly requests allowance of this claim.

Claims 7-9 are dependent on and additionally limit claim 6. Since claim 6 is allowable over the cited art, claims 7-9 are also allowable over the cited art for at least the same reasons as claim 6.

Claim 9 is amended herein to recite, in part, "forming a query comprised of audio and/or visual feature descriptor values, wherein the feature descriptor values denote proximity to the semantic concepts of the nodes." No new matter is introduced to claim 9 and support for this amendment can be found at least at page 7, lines 7-22 of the Application. Furthermore, the Applicant cannot find in Bergman a teaching of feature descriptor values denoting proximity to semantic concepts of nodes, as recited in claim 9. Thus, the Applicant respectfully submits that Bergman does not anticipate claim 9 and earnestly requests allowance of this claim.

Claim 10 recites, in part, "an encoded media network knowledge representation that comprises a network having nodes that represent semantic concepts." As discussed above, Bergman does not teach a network having nodes that represent semantic concepts, as recited in claim 10. Therefore, the Applicant respectfully submits that claim 10 is not anticipated by Bergman, and earnestly requests allowance of this claim.

Patent Application No. 10/002,998

Claim 11 is dependent on and additionally limits claim 10. Since claim 10 is allowable over the cited art, claim 11 is also allowable over the cited art for at least the same reasons as claim 10.

Claim 12 recites, in part, "an encoded media network knowledge representation that comprises a network having nodes that represent semantic concepts." As discussed above, Bergman does not teach a network having nodes that represent semantic concepts, as recited in claim 12. Therefore, the Applicant respectfully submits that claim 12 is not anticipated by Bergman, and earnestly requests allowance of this claim.

Claim 13 is dependent on and additionally limits claim 12. Since claim 12 is allowable over the cited art, claim 13 is also allowable over the cited art for at least the same reasons as claim 12.

Claim 14 recites, in part, "an encoded media network knowledge representation that comprises a network having nodes that represent semantic concepts." As discussed above, Bergman does not teach a network having nodes that represent semantic concepts, as recited in claim 14. Therefore, the Applicant respectfully submits that claim 14 is not anticipated by Bergman, and earnestly requests allowance of this claim.

Claim 15 recites, in part, "an encoded media network knowledge representation that comprises an encoded network having nodes that represent semantic concepts." As discussed above, Bergman does not teach a network having nodes that represent semantic concepts, as recited in claim 15. Therefore, the Applicant respectfully submits that claim 15 is not anticipated by Bergman, and earnestly requests allowance of this claim.

Claim 16 recites, in part, "an encoded media network knowledge representation that includes an encoded network having nodes that represent semantic concepts." As discussed above, Bergman does not teach a network having nodes that represent semantic concepts, as recited in claim 16. Therefore, the Applicant respectfully submits that claim 16 is not anticipated by Bergman, and earnestly requests allowance of this claim.

Claim 17 recites, in part, "means for forming a network having logical nodes that represent semantic concepts." In rejecting claim 17, the Examiner cites Fig. 9 of Bergman. Office Action, page 10. Fig. 9 is a graphical representation illustrating an example of feasible modality translations and fidelity summarizations within the InfoPyramid framework. Bergman, column 4, lines 34-37. The InfoPyramid describes content in different modalities

Patent Application No. 10/002,998

(e.g., video, audio, text, etc.) and at different fidelities. Bergman, column 7, lines 14-16. Each adjacent node corresponds to a transformation, either between two different modalities or between two different fidelities. Bergman, column 10, lines 11-15.

The Applicant respectfully submits, however, that missing from Bergman is a teaching of semantic concepts included with the InfoPyramid framework. Bergman describes a framework that provides content transformations (modality and/or fidelity), but does not present semantic knowledge. It is respectfully submitted that Bergman does not supply a teaching of means for forming a network having nodes that represent semantic concepts, as recited in claim 17. Thus, the rejection of claim 17 is improper because it does not ascribe due consideration to all the limitations in the claim. The Applicant therefore respectfully submits that claim 17 is not anticipated by Bergman, and earnestly requests allowance of this claim.

Claims 18-23 are dependent on and further limit claim 17. Since claim 17 is allowable over the cited art, claims 18-23 are also allowable over the cited art for at least the same reasons as claim 17.

Claim 24 recites, in part, "first instructions for forming a network having logical nodes that represent semantic concepts." In rejecting claim 24, the Examiner cites Fig. 9 of Bergman. Office Action, page 10. Fig. 9 is a graphical representation illustrating an example of feasible modality translations and fidelity summarizations within the InfoPyramid framework. Bergman, column 4, lines 34-37. The InfoPyramid describes content in different modalities (e.g., video, audio, text, etc.) and at different fidelities. Bergman, column 7, lines 14-16. Each adjacent node corresponds to a transformation, either between two different modalities or between two different fidelities. Bergman, column 10, lines 11-15.

The Applicant respectfully submits, however, that missing from Bergman is a teaching of semantic concepts included with the InfoPyramid framework. Bergman describes a framework that provides content transformations (modality and/or fidelity), but does not present semantic knowledge. It is respectfully submitted that Bergman does not supply a teaching of first instructions for forming a network having logical nodes that represent semantic concepts, as recited in claim 24. Thus, the rejection of claim 24 is improper because it does not ascribe due consideration to all the limitations in the claim. The Applicant therefore respectfully submits

Patent Application No. 10/002,998

that claim 24 is not anticipated by Bergman, and earnestly requests allowance of this claim.

CLAIM REJECTIONS UNDER 35 USC §103:

Claim 2 of the pending Application stands rejected as obvious over Bergman in view of Miller, "WordNet, A Lexical Database for English", Communications of the ACM, Nov. 1995, vol. 38, no. 11, pp. 39-41 ("Miller").

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the reference or to combine reference teachings. MPEP 2143. Both the suggestion and reasonable expectation of success must be founded in the prior art, not in applicants' disclosure. In re Vaack, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991) (citing In re Dow Chemical Co., 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988)). "Broad conclusory statements regarding the teachings of multiple references, standing alone, are not 'evidence.'" In re Dembicziak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed.Cir. 1999).

In rejecting claim 2, the Office Action lists desirable features of Miller and concludes, "Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine Bergman et al with Miller to obtain the invention specified in claim 2, a method for encoding knowledge. The modification would have been obvious because one of ordinary skill in the art would have been motivated to support the ability to describe real world relationships between multiple knowledge and language components." Office Action, page 15.

It is respectfully submitted that no evidence has been presented in the Office Action to suggest or motivate someone to combine the Bergman and Miller. Rather, the Office Action has erroneously construed the teaching of Bergman and Miller through impermissible hindsight in view of the Applicants' disclosure. Therefore, it is respectfully submitted that a *prima facie* obviousness rejection of claim 2 has not been established and the 35 USC §103 rejection of claim 2 should be withdrawn. In addition, it is respectfully submitted that claim 2 is allowable over the cited art and allowance of claim 2 is earnestly requested.

Patent Application No. 10/002,998

NEW CLAIMS:

New claim 25 is added to the Application by this Amendment for examination. No new matter is believed to be introduced by claim 25, and support for this claim can be found at least at page 4, lines 10-12.

New claim 26 is added to the Application by this Amendment for examination. No new matter is believed to be introduced by claim 25, and support for this claim can be found at least at page 4, line 21 - page 5, line 2.

New claim 27 is added to the Application by this Amendment for examination. No new matter is believed to be introduced by claim 25, and support for this claim can be found at least at page 7, lines 7-22.


CONCLUSION

In view of the forgoing remarks, it is respectfully submitted that the pending Application is now in condition for allowance and such action is respectfully requested. If any points remain at issue which the Examiner feels could best be resolved by a telephone interview, the Examiner is urged to contact the attorney below.

Please charge Deposit Account 50-0510 the fee of \$54 for the addition of three independent claims to the Application. No additional fee is believed due with this Amendment, however, should a fee be required please charge Deposit Account 50-0510. Should any extensions of time be required, please consider this a petition thereof.

Respectfully submitted,

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